



Refinement of a Single-Session, Exposure-Based Intervention for Reducing Anxiety in High-Risk Pregnancies Through a Participatory Research Design

Cristina Wood, MD MS (she/her)

Associate Professor Anesthesiology, University of Colorado School of Medicine

Medical Director Anesthesiology Colorado Fetal Care Center

Section Chief OB/GYN Anesthesiology, University of Colorado Hospital



SPEAKER DISCLOSURE

This study was funded by: NIH
Grant # R34MH133685.

No additional disclosures or
conflicts of interest.

BACKGROUND

- Perinatal mood, anxiety, and trauma symptoms (PMATS) are among the most common mental health disorders found in pregnant patients.
- PMATS affect approximately 1 in 6 patients through the postpartum year.¹⁻³
- CDC 2022: Mental health conditions were the most common cause of maternal mortality.⁴



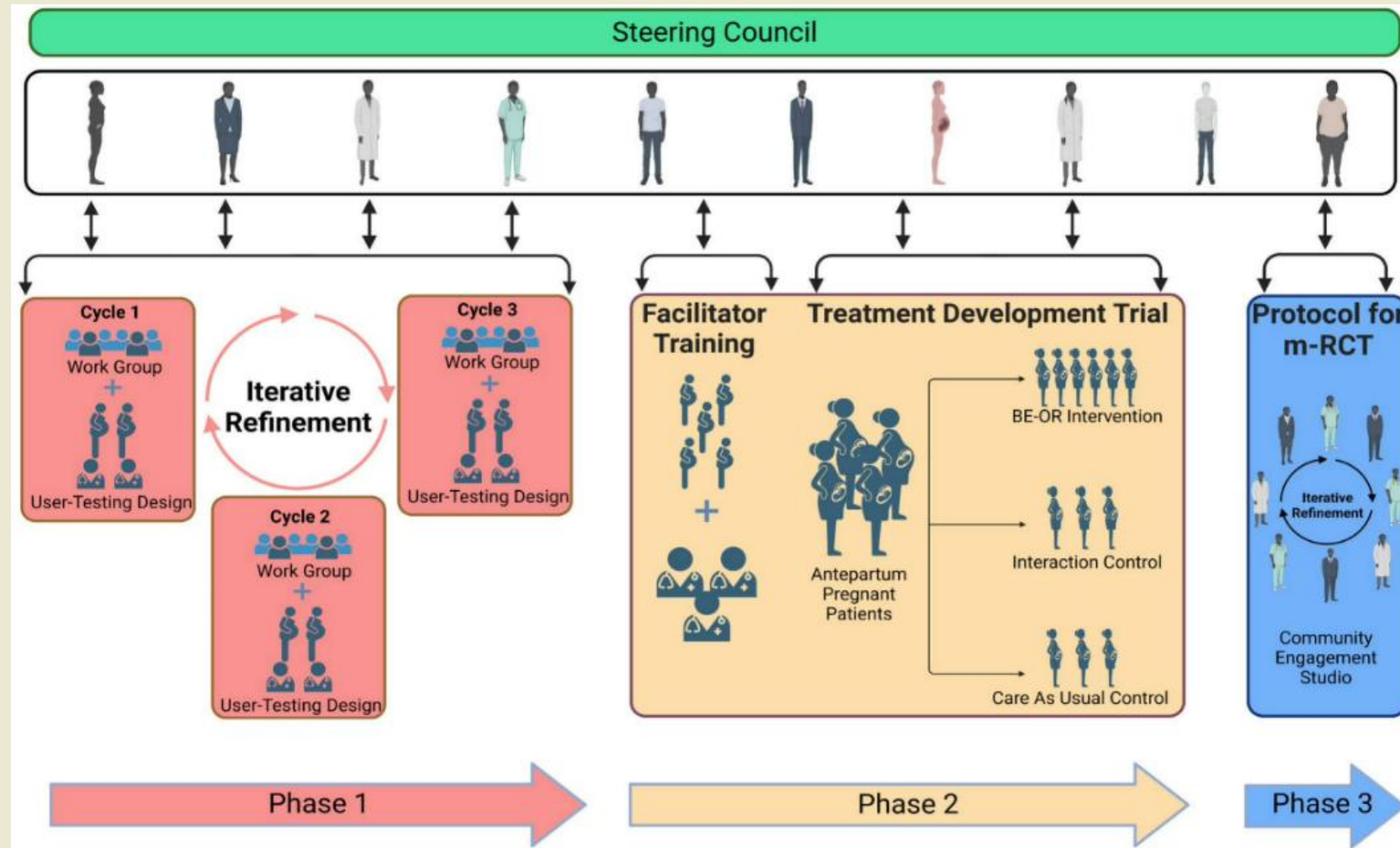
CARE: Communication, Agency, Readiness, Empowerment for Cesarean Delivery

- **Specific Aim Phase 1:** To enhance the efficacy, responsiveness to diverse populations, scalability, and sustainability of intervention on a large L&D unit by engaging in an iterative refinement process.
 - *Hypothesis: There are barriers and determinants to the intervention that must be refined so it is implementable and acceptable to engage the target mechanism on a large L and D unit.*

1. Uguz F, et al. Psychiatry research 2019;272:316-318.
2. McKee K, et al. BMC Women's Health 2020;20(1):1-7.
3. Dennis C, et al. The British Journal of Psychiatry 2017;210(5):315-323.
4. Pregnancy-Related Deaths: Data From Maternal Mortality Review Committees in 36 U.S. States, 2017–2019 | Maternal Mortality Prevention | CDC.

METHODS

Overview of 3-Year Study



- **12 Workgroups:**
 - Anesthesiologists, Obstetric providers, Obstetric nursing, Mental health providers, Hospital administrators, Individuals with lived experiences.
- **12 User Testing Design Antepartum Patients**
- **Qualitative data** were collected via semi-structured discussions, transcribed, and analyzed iteratively.



CARE Intervention Arm 1-hour single session

CARE Intervention Implementation Checklist

Preparation

- Prepare OR and people for infection control procedures (see checklist)

Intro to CARE Intervention

- Build rapport (e.g., ask about baby's name, etc., acknowledge difficulty of situation)
- Intervention rationale
 - distress over uncertainty
 - purpose of intervention to develop schema/mental map of the delivery and reduce fear of fear
 - hope this will reduce PMADs
- Ask about any particular mental health and/or physical risks to be aware of (fainting, previous traumas, panic attacks, etc.)
- Review safety precautions about going into the OR (what we'll wear, not to touch anything unless directed, everyone sitting, let us know if you're dizzy/overheated)
- Introduce CARE card
- Introduce that this can bring distress, how we monitor and how to let us know, and options if distress is felt; Introduce SUDS scale and let know we'll specifically ask at 3 time points
- Assess SUDS: Low 1-3 / Moderate 4-7 / High 8-10

Antepartum Room Activities

- Start in patient room
- Ask patient about support person in operating room / music preference if desired
- Reminder to bring a camera to take pictures
- Change into gown and support person into 'bunny suit' (remind support person to wear comfortable clothes beneath the 'bunny suit')
- Discuss IV placement and fetal monitoring preoperatively
- Discuss NPO status and encourage support person to eat

Transition to OR and Introduction to OR

- Describe where support person will sit on day of delivery outside OR
- Discuss who will be in operating room when you arrive and what their roles will be (scrub tech, nurses) and cover who arrives later and their roles and how many people total may be there for delivery
- Discuss when and where the pediatric/NICU team will be located (will discuss warmer and delivery later)

RESULTS

Patient Experience & Outcomes

- Reduced mental health symptoms
- Postpartum room
- CARE card

PATIENT PREFERENCES CARD

Before the Cesarean

Please remind me to bring:

I want to let the anesthesiologist know about:

I am planning on having the following support person:

Other:

In the Operating Room

Things that will help me feel more comfortable are:

Implementation Workflow



- OR and Staff Availability
- Timing of follow up
- Standardized teams

Stakeholder Buy-In



- CPT codes
- Identify Champions

Systems-Level Considerations



- HCAHPS
- Infection Control
- Safety Checks

CONCLUSIONS

- **Current measures** align with program objectives and support reduction in mental health symptoms
- **Standardized workflows** required, including:
 - Consistent OR availability
 - Designated CARE team
- **Leadership engagement** from physicians and nurses is essential for adoption
- **System-level buy-in** supported by:
 - Billing codes & reimbursement (e.g., HCAHPS)
 - Infection control approval

